



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,518	10/15/2003	Christopher H. Porter	355492-4250	5243

38706 7590 10/03/2005

FOLEY & LARDNER LLP
1530 PAGE MILL ROAD
PALO ALTO, CA 94304

EXAMINER

JONES, DAMERON LEVEST

ART UNIT	PAPER NUMBER
----------	--------------

1618

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/687,518

Applicant(s)

PORTER, CHRISTOPHER H.

Examiner

D. L. Jones

Art Unit

1618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/7/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

850

Art Unit: 1618

APPLICANT'S INVENTION

1. The instant invention is directed to a material and method of filling a cavity using a material that has a low viscosity when delivered and a high viscosity when in the cavity.

Note: Claims 1-4 are pending.

102 REJECTIONS

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Herrmann et al (US Patent No. 2,155,658).

Herrmann et al disclose surgical and medical preparations for insertions, infusion, or injection into the human or animal system for therapeutic and cosmetic purposes. Preparations such as plastic fillings and joint lubricants may be used for surgical purposes (page 1, left column, lines 1-7). The plastic filling may be used wherever cavities are to be filled in the body (page 1, column 1, lines 22-34). The preparations of Herrmann et al may be adapted to various surgical and medical purposes with great accuracy. The preparations are polymerized vinyl alcohols of various viscosities, acetals, and ethers, as well as mixtures of such compounds (page 1,

Art Unit: 1618

columns 1-2, bridging paragraph). The polymerized vinyl compounds may be treated to form solutions, jellies, pastes, or powders adapted merely to swell up with solvents or kneadable masses with deftness and exactness (page 1, right column, lines 28-38).

One important characteristic of the preparations is a change of alteration of the viscosity of the product. For example, more or less free flowing solutions to thicken, gelatinize, or become more solid are generated. The modifications to the preparations to a more or less flowable preparation may occur by irradiation/thermal treatment to result in the complexion of colloidal properties of the solutions, pastes, etc. (pages 1-2, bridging paragraph). By means of the appropriate physical or colloidal chemical solidifying methods or combinations thereof, low concentrated solutions, jellies, pastes, or plastic masses may be given the solidity characteristics of highly concentrated, relatively insoluble substances. For example, deposits, fillings, etc. which are made solid for some definite purpose, may be introduced into the body with the incorporation of a disproportionally small quantity of substance foreign to the body. In another example, it may be desirable to obtain highly concentrated fillings, etc. which are as compact as possible, and in such cases, concentrated solutions, jellies, pastes, or plastic masses may be used and the consistence required for the simplest and best method of incorporation into the body may be effected by reducing the viscosity (page 2, columns 1-2, bridging paragraph). In addition, the preparations of Herrmann et al may be used to fill the lung cavity (page 2, right column, lines 24-39). In Example 1, a solution having the consistency of honey is produced. This material is exceptionally well suited for filling up cavities in the body or as a joint lubricant (page 2, right column, lines 61-75).

Art Unit: 1618

In Examples 2-11, various combinations are used to generate preparations for cosmetic and/or therapeutic purposes (page 3).

Thus, both Applicant and Hermann et al disclose a material and method of delivering that material to a desired location.

103 REJECTIONS

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herrmann et al (US Patent No. 2,155,658) in view of Porter (US 2003/0194389) and Davies (US Patent No. 4,482,538).

Herrmann et al (see discussion above) fail to disclose the various types of plastics which may be used in their invention.

Porter is referenced only because it discloses that rheology modifying agents may be used to alter the viscosity, cohesiveness, powder suspending ability, and radiopacity of occlusive compositions. In particular, pseudo-plastic and plastic fluids are listed as useful agents (see entire document, especially, page 5, paragraph [0049]).

Davies is cited only for its teachings on Bingham plastics and pseudo plastics. In particular, Davies discloses that a viscosity is the ratio of the shear stress required to maintain a given shear rate in the flow of a fluid. Some fluids are referred to as being

Art Unit: 1618

non-Newtonian fluids because either the viscosity is not constant and/or the flow behaviour cannot be fully described by viscosity alone. Examples of non-Newtonian fluids include polymer melt, solutions of high molecular weight, biological fluids, colloidal suspensions, and clay suspensions. However, a number of non-Newtonian fluids have flow behavior that can be accurately described by their viscosity. These fluids are known as purely-viscous non-Newtonian fluids and may be classified as either pseudo-plastic or dilatants depending on whether the viscosity decreases or increases with the shear rate. Also, there are certain non-Newtonian fluids which will not flow unless the shear stress exceeds a critical value. These fluids, Bingham plastics, possess a yield stress and the viscosity remains constant with respect to shear rate (column 1, lines 41-66).

It would be obvious to one of ordinary skill in the art to alter the viscosity of the plastic filler to fit the desired body cavity because as set forth by both Porter and Davies above, various agents may be used to alter the viscosity of a material. Thus, if one desires a purely viscous non-Newtonian fluid, one would be motivated to use pseudo-plastic. However, if one desires a non-Newtonian fluid which will not flow unless the shear stress exceeds a critical value, then one would be motivated to use a Bingham plastic. Hence, it would be obvious to the skilled practitioner to select the plastic filling for the desired purpose. Also, it should be noted that in the primary reference, Herrmann et al, various plastic filling combinations were utilized having different viscosities. Since the secondary references are directed to cosmetic/therapeutic purposes, they may be considered to be within the same field of endeavor as the


Art Unit: 1618

primary reference which discloses that their preparations may be used for cosmetic and/or therapeutic purposes. Thus, the references are combinable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. L. Jones whose telephone number is (571) 272-0617. The examiner can normally be reached on Mon.-Fri., 6:45 a.m. - 3:15 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on (571) 272-0602. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


D. L. Jones
Primary Examiner
Art Unit 1618

September 27, 2005